## AMENDMENTS TO THE SPECIFICATION

On page 2, please delete the second full paragraph in its entirety and replace it with the following, with the changes shown"

The utility must always have the safety of the public as a top priority. However, high impedance fault detection has not been possible in the past and realistic detection algorithms are not anticipated that can detect 100% of all downed conductors, while having 100% security against misoperation. The utilities need an economic solution and a system that can reliably detect high impedance faults and are also secure in that they do not falsely detect a high impedance fault (HIF).

Please delete the paragraph that begins at the bottom of page 12 and continues to page 13 in its entirety and replace it with the following, with the changes shown:

Fig. 2a shows in block diagram form a typical embodiment for acquisition 28, filtering 30 29, high impedance fault detection system 20 and decision logic 30 32 of Fig. 2 as well as other elements typically associated with a protective relay. As is shown in Fig. 2a, acquisition 28 is the combination of the potential transformer PT and current transformer CT shown in Fig. 1 whose outputs are filtered by an associated one of filters 21 and provided to a multiplexer 23.

On page 13, please delete the first full paragraph in its entirety and replace it with the following, with the changes shown:

The output of multiplexer 23 is connected by an analog to digital converter 25 to the input of digital signal processor 27. The embodiment shown in Fig. 2a also includes a memory 32 33 and a CPU board 34 which includes a microprocessor 34a, a random access memory 34b and a read only memory 34c. As was described above in connection with Fig. 2, each of the individual high impedance fault detection systems 22, 24, 26 shown in that figure are implemented in microprocessor 34a. Also as was described above in

connection with Fig. 2, microprocessor 34a is also used for implementing non-HIF detection algorithms such as protection, other than HIF detection, and control algorithms and if desirable metering and/or monitoring algorithms. The output of CPU board 34, which is an indication that a high impedance fault or a non-high impedance fault condition was determined is connected to alarming 36.